

CLAIMS:

1. Method for the simultaneous detection and analysis of at least two electromagnetic signals (8, 9) by a common detector (6), the detection and analysis of at least one radiation image signal (8, 9) taking place,

characterized by

- dividing an input radiation image (9) into at least two partial images (TB1, TB2, TB3, TB4),

- projecting the partial images (TB1, TB2, TB3, TB4) onto a radiation detector (6),

- an imaging of the partial images (TB1, TB2, TB3, TB4) on the radiation detector (6) taking place in such a manner that the radiation intensities of the partial images (TB1, TB2, TB3, TB4) are projected from the image center of the input radiation image (9) to the edge of the radiation image (9) on the detector (6).

2. Method according to Claim 1,

characterized in that the partial images (TB1, TB2, TB3, TB4) of the input radiation image (9) are reflected.

3. Method according to Claim 1,

characterized in that the partial images (TB1, TB2, TB3, TB4) of

the input radiation image (9) are displaced in the direction of the image edge.

4. Method according to Claim 2 or 3,

characterized in that, for the case of a square input radiation image (9), a division of the input radiation image (9) into four partial images (TB1, TB2, TB3, TB4) takes place, and an imaging of the partial images (TB1, TB2, TB3, TB4) takes place in such a manner that radiation intensities are projected from the image center of the input radiation image (9) in the direction of a corner of the radiation image (9) on the detector (6).

5. Method according to one of Claims 1 to 4,

characterized in that a data communication signal is detected as one of the electromagnetic signals (8, 9).

6. Method according to one of Claims 1 to 5,

characterized in that the radiation images (8, 9) of reference objects (7, 12), particularly of celestial bodies, are detected.

7. Method according to Claim 6,

characterized in that radiation images (8, 9) of the earth (7) and stars (12) are detected simultaneously and the radiation image (9) of the earth (7) is divided into partial images (TB1, TB2, TB3, TB4).

8. Receiver (1) having a device for the simultaneous detection and analysis of at least two electromagnetic signals by a common detector (6), the device being designed for the detection and analysis of at least one radiation image signal (8, 9),

characterized in that at least one radiation image splitter (4) is provided for dividing an input radiation image (9) into at least two partial images (TB1, TB2, TB3, TB4) as well as for projecting the partial images on a radiation detector (6) which is designed such that an imaging of the partial images (TB1, TB2, TB3, TB4) on the radiation detector (6) takes place in such a manner that radiation intensities of the partial images (TB1, TB2, TB3, TB4) are projected from the image center of the input radiation image (9) to the edge of the radiation image (9) on the detector (6).

9. Receiver according to Claim 8,  
characterized in that the partial images (TB1, TB2, TB3, TB4) of the input radiation image (9) are reflected.

10. Receiver according to Claim 8,  
characterized in that the radiation image splitter (4) is designed such that the partial images (TB1, TB2, TB3, TB4) of the input radiation image (9) are displaced in the direction of the image edge.

11. Receiver according to Claim 9 or 10,  
characterized in that, for the case of a square input radiation  
image (9), the radiation image splitter (4) is designed such that  
a division of the input radiation image (9) takes place into four  
partial images (TB1, TB2, TB3, TB4) and an imaging of the partial  
images (TB1, TB2, TB3, TB4) takes place in such a manner that  
radiation intensities are projected from the image center of the  
input radiation image (9) in the direction of a corner of the  
radiation image (9) on the detector (6).

12. Receiver according to one of Claims 8 to 11,  
characterized in that the receiver (1) is constructed as part of  
a data communication device.

13. Receiver according to one of Claims 8 to 12,  
characterized in that the receiver (1) is designed as a sensor  
for the detection of radiation images (8, 9) of reference objects  
(7, 12), particularly of celestial bodies.

14. Receiver according to one of Claims 8 to 13,  
characterized in that the receiver (1) is designed as an optical  
receiver.

15. Receiver according to Claim 14,  
characterized in that the receiver (1) is designed as a combined  
earth-star sensor.